After Sales Technical Documentation

# SERVICE SOFTWARE (DEALER VERSION) INSTRUCTIONS FOR NHA–2

Original, 47/95

# AMENDMENT RECORD SHEET

| Amendment Number | Date | Inserted By | Comments |
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# SERVICE SOFTWARE INSTRUCTIONS (DEALER VERS.)

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# Introduction

## General

Service software ”PCLocals” is specially designed to facilitate the servicing of fifth generation cellular telephones.

The software can be used to control the phone according to the user’s requirements merely by entering commands via the keyboard / mouse of a PC connected to the phone.

This section refers to AMPS PCLocals Version 1.00. NMP After Sales will notify service personnel about future upgrades via Technical Bulletins. Software upgrades will be available from your local NMP outlet.

## Required Equipment

– Computer: IBM PC / AT or compatible with one unused serial port (COM1 or COM2*), one parallel port (LPT1), hard disk recommended.

– Operating System: DOS Version 3.3 or later

– 500 kB free memory under DOS

– Display: Any 80–character text display

– Dealer software; product code 0774014 for 3.5” disk or Dealer software; product code 0774013 for 5.25” disk.

– Software Protection Key PKD–1 (product code 0750018)

– M2BUS interface cable DAU–4S (product code 0730057)

*) Note: A number of PC’s of an older generation use the Intel, National Semiconductor, or United Microelectronics IC 8250 as the serial port UART. This is a comparatively inefficient circuit for current purposes and does not necessarily support the M2BUS adapter at 9600 baud. The newer UART’s NS16450 and NS16550AF of National Semiconductor offer solutions for these problems.

# Mechanical Connections

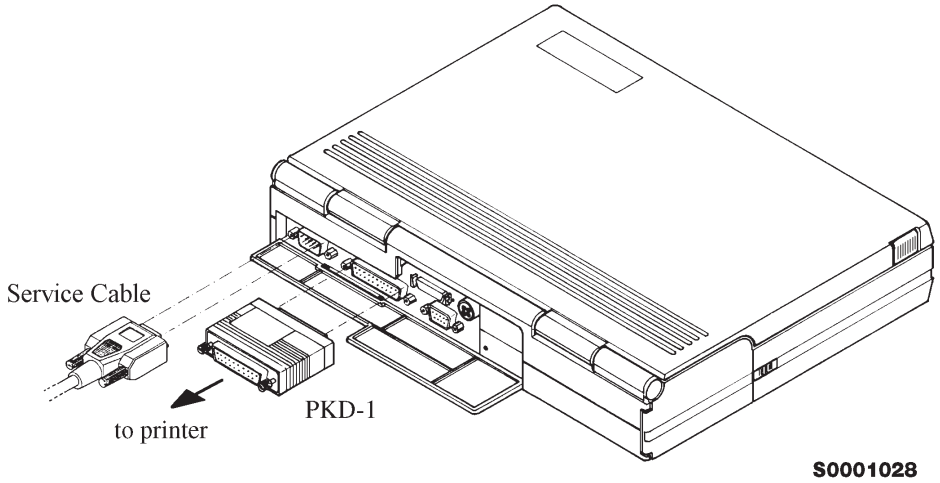
*Caution: Ensure that you have switched off the PC and the printer before making connections !*

*Caution: Do not connect the PKD–1 to the serial port. This could damage the PKD–1 !*

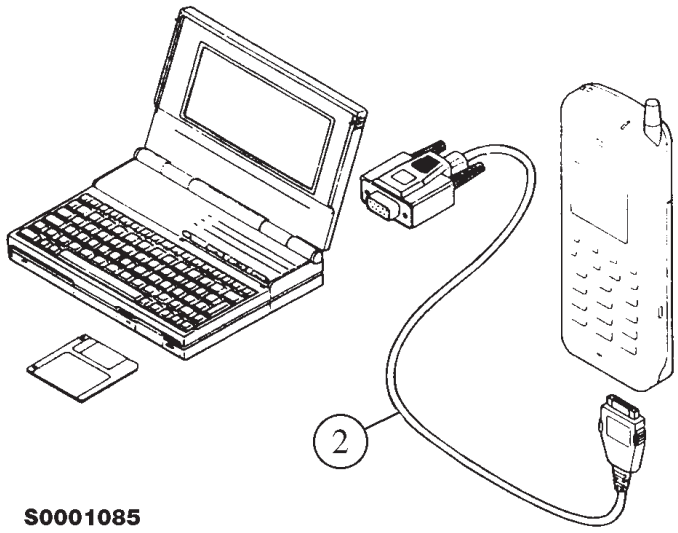
The software controls the phone via a separate adapter connected to the serial port of the PC and to the telephone's M2BUS (DAU–4S and XCM–1).

Attach the protection key PKD–1 to parallel port one (25–pin female D–connector) of the PC. When connecting the PKD–1 to the parallel port be sure that you insert the PC end of the PKD–1 to the PC (male side). If you use a printer on parallel port one, place the PKD–1 between the PC and your printer cable.

The PKD–1 should not effect devices working with it. If some errors occur (errors in printing are possible) please try printing without the PKD–1. If printing is OK without the PKD–1 please contact your dealer. We will offer you a new PKD–1 in exchange for your old one.



Attach one end of the M2BUS interface cable, DAU–4S (2), to the PC serial port and the other end to the bottom connector of the phone.




## Start Up Procedure

Start the phone by pressing the power–on button of the handset. Switch PC power on.

To start the software on diskette, proceed as follows:

1. Insert PC Locals disk into drive A of your PC
2. Log into drive A: **type *A:* and press *Enter***
3. Start service software: **write *NHA2SUBD* and press *Enter***

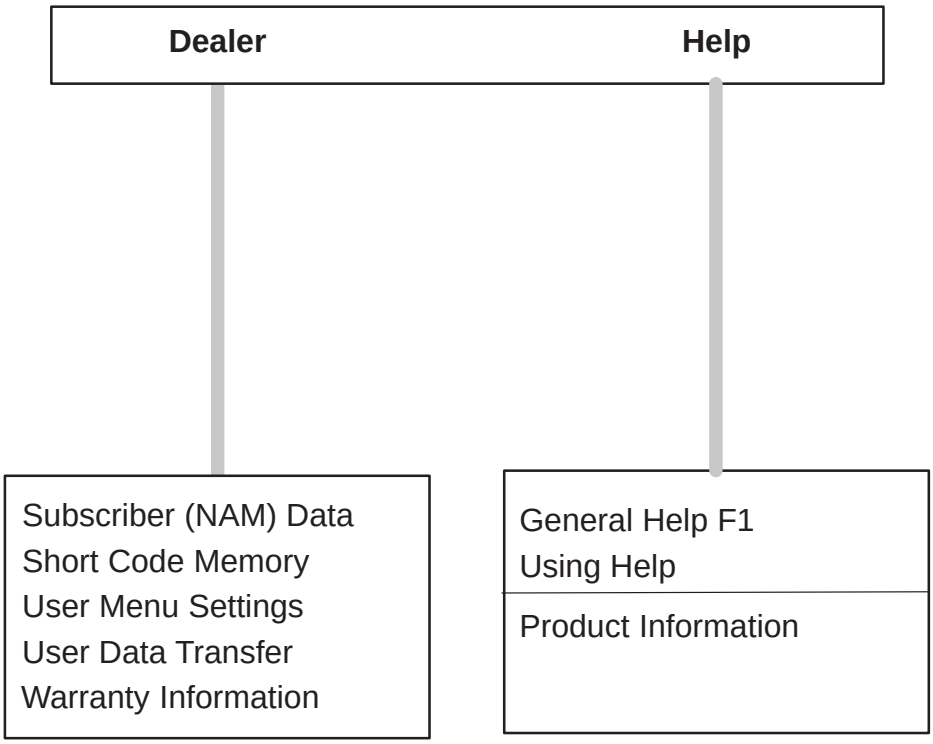
To start the software on hard disk (if installed), proceed as follows:

1. Log into drive C: **type *C:* and press *Enter***
2. Start service software: **write *NHA2SUBD* and press *Enter***

The service software starts by loading the configuration file. After it has been loaded, a menu bar is shown at the top line of the display. Refer to section ”Using Menus” for how to proceed through the menus. In the middle of the display will be a Phone Identification Window which displays some basic information about the connected phone.

Press *Enter* to close the Phone Identification Window.

# Service Software (Dealer version) Menu Structure



# Using Menus

There are three visible components to PCLocals: the menu bar at the top, the window area in the middle and the status line at the bottom of the screen. Many menu items also offer dialog boxes. Although there are several different ways to make a selection in PCLocals, they access the same commands and dialog boxes.

## Menu Bar

The menu bar is the primary access to all the menu commands.

Here is how you choose menu commands using the keyboard:

– Press *F10* to make the menu bar active; the next thing you type will relate to the items on the menu bar.

– Use the ↑ ↓ arrow keys to select the menu you wish to display and then press *Enter*. As a shortcut to this step you can just select the highlighted letter of the menu title. For example, when the menu bar is active, press *F* to move to and display the File menu. At any time press *Alt* and the highlighted letter (eg. *Alt* + *F*) to display the menu you want.

– Use the ← → arrow keys to select command from the menu you have opened and press *Enter*. As a shortcut you can just press the highlighted letter of the menu command.

At this point PC Locals either carries out the command, displays a dialog box or displays another menu.

There are two ways to choose commands with a mouse:

– Click the desired menu title to display the menu and click the desired command.

– Drag straight from the menu title down to the menu command. Release the mouse button on the command you want. If you change your mind, just drag off the menu; no command will be chosen.

PC Locals offers a number of quick ways to choose menu commands. The click–drag method for mouse users is an example. From the keyboard, you can use a number of keyboard shortcuts (or ’hotkeys’) to access the menu bar, choose commands or work with dialog boxes. You need to hold down *Alt* while pressing the highlighted letter when moving from input box to a group of buttons or boxes.

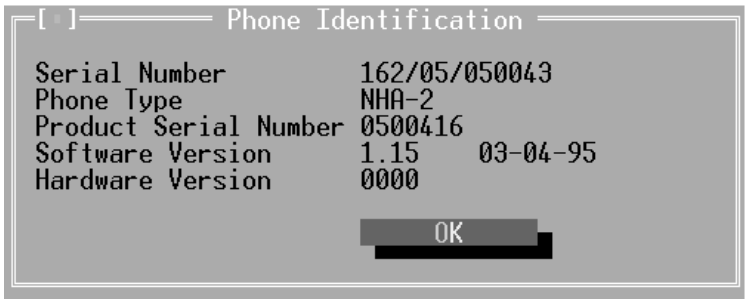
## Windows

Some of the actions you see and do in PCLocals happens in a window. A window is a screen area that you can open, close and move.

Most of the windows have these things in common:

– a title bar
– a close box

The following figure shows a typical window:




The close box of a window is the box in the upper left corner. Click this box to quickly close the window.

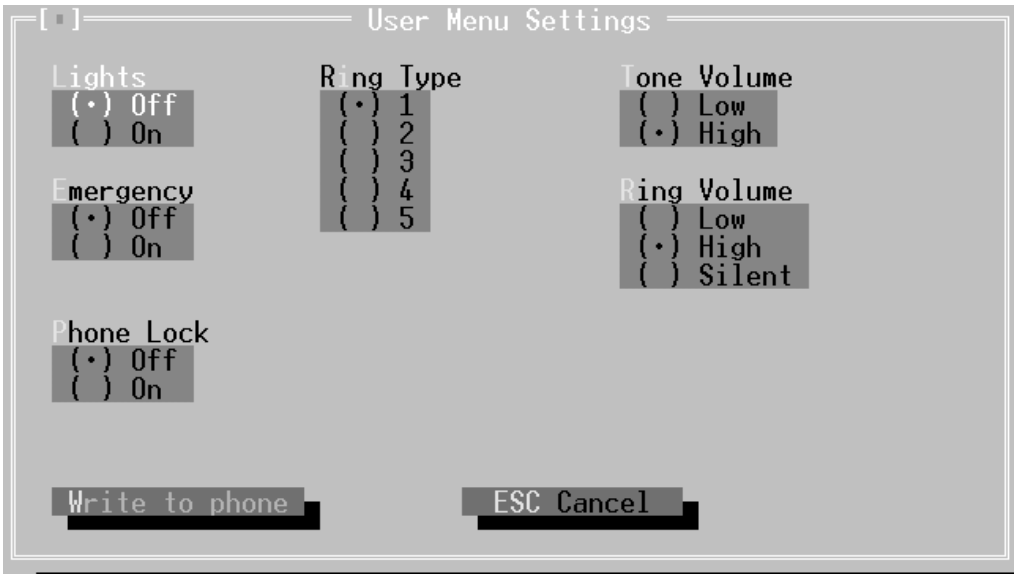
The title bar, the uppermost horizontal bar of a window, contains the name of the window. You can drag the title bar to move the window around.

## Dialog Boxes

Most of the menu commands lead to a dialog box. Dialog boxes offer a convenient way to view and set multiple options. They are typically used for making settings or performing some action where the phone must be in a certain state and all other actions must be denied. When you are making settings in a dialog box you work with five basic types of on–screen control:

– action buttons
– radio buttons
– check boxes
– input boxes
– list boxes

Dialog boxes also have similar features to windows; title bar and close box. Below is a sample box which lists some of these features:




This dialog box has two standard buttons: *Enter* and *Esc*. If you choose *Enter*, the choices in the dialog box are accepted. If you choose *Esc*, nothing changes and the dialog box is exited. *Esc* is always a keyboard shortcut to exit the dialog box.

If you are using a mouse, click the dialog–box button you want. When you are using the keyboard, press *Alt* and the highlighted letter of an item to activate it. Press *Tab* to move forwards or backwards from one item to another in a dialog box. Each element is highlighted when it becomes active.

Radio buttons are like car–radio buttons. They arranged in groups, and only one radio button in a group can be selected at any one time. To choose a radio button, click it or its text. From the keyboard, select *Alt* and the highlighted letter or press *Tab* until the group is highlighted, and then use the arrow keys to choose a particular radio button. Press *Tab* again to leave the group with the new radio button chosen.

Check boxes differ from radio buttons in that you can have any number of check boxes checked at any time. When you select a check box an X appears in it to show you it is on. An empty box indicates it is off. To change the status of a check box, click it or its text, press *Tab* until the check box is highlighted and then press the *Spacebar* or select *Alt* plus the highlighted letter.

If several boxes apply to a topic, they appear as a group. In this case tabbing moves to the group. Once the group is selected use the arrow keys to select the item you want and then press *Spacebar* to check or uncheck it.

Input boxes let you type in text. Most basic text–editing keys work in the text box (for example arrow keys, *Home*, *End*, *Backspace*, *Del* and *Ins*). If the contents of the input box are highlighted (typically when you first select it) and you start typing in new data, the old data is erased.

A final component of some dialog–boxes is a list box, which lets you scroll through and select from variable length lists without leaving a dialog box. You make list box active by clicking it or by choosing the highlighted letter of the list title (or press *Tab* until it is highlighted). Once a list box is displayed, you can use the scroll box to move through the list or press the up or down arrow from the keyboard.

## File Selection Dialog Box

The File–Selection box offers you a way to select the file you want to open for reading or writing. Below is an example of such a box:

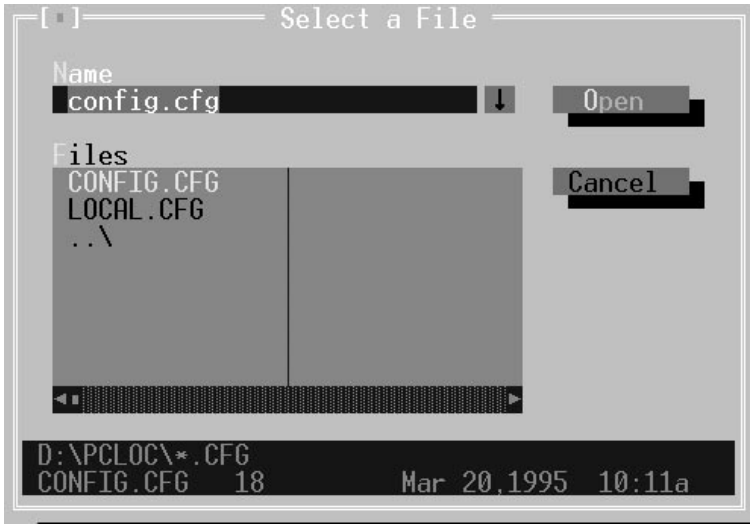



Figure 1.

# PCLocals Menu Functions Overview

PCLocals is divided into 2 main blocks: Dealer and Help.

Dealer is used to edit all NAM and other user information. It also contains user data transfer programs to be used in case a faulty phone should be replaced with a new unit.

Help contains all the help information for using PCLocals.

# Dealer Menu

Selecting Dealer will bring up a sub–menu as shown below:

– Subscriber (NAM) data
– Short code memory
– User menu settings
– User data transfer
– Phone identification
– Warranty information

*Note: If NAM password differs from factory password it is asked when entering dealer menu.*

## Subscriber (NAM) Data

This can be used to program all the Subscriber Data and Common NAM Data information into a telephone. This can also be programmed through the phone's keypad.

*Note: If you wish to only view and not change the NAM information, press Esc to exit the screen.*

Any NAM in the phone can be read from/written to by selecting either 1 or 2. When a selection is made all the NAM information displayed on the PC is updated. Basic information displayed next to 1/2 is operator name (if the phone has been programmed using the customisation feature) and Subscriber Number (MIN–P).

From this example it can be seen that NAM 1 has been programmed. The ESN of the phone is also clearly displayed.

Dealers are strongly advised to use the customisation feature. For any operator they could store, as a default, the following parameters:

**Home System Identification (SIDH)**

– This number is used to define the primary traffic area of the phone. The number contains the country code, system bit information and the area code.

**Local Use Mark**

– This option is used to determine whether the phone must respond to local control messages sent from the exchange.

**Access Method (EX)**

– This is used to define the method of sending the phone identification data (x = country code in use).

**Initial Paging Channel (IPCH)**

– This number is used to identify the primary traffic channel of the phone. Typically 333 for system A and 334 for system B.

**Access Overload Class (ACCOLC)**

– This number is used to identify which overload class the phone belongs to. Numbers 0–9 corresponds to normal phone class (typically 0 + last digit of MIN).

**Group Identification Mark (GIM)**

– This is used to identify the group of the phone.

**Purchasing Date**

– Purchasing date is used for warranty purposes. This location should be programmed when the phone is delivered to the customer. This location can be programmed only once, when the contents of the location is 0000. After it is programmed, it can be read but not changed any more.

You are also able to store:

**Language**

– Four languages can be selected (English, French, Spanish and Portuguese).

**Emergency Numbers**

– A few emergency numbers can be defined.

**Lock Code**

– A four digit individual lock code can be defined.

**Wake Up Message**

– This option enables defining for example the name of the phone owner into the power up display. If the name is not entered here, the subscriber’s number is shown.

## NAM Programming

The process for programming a NAM with this method is as follows:

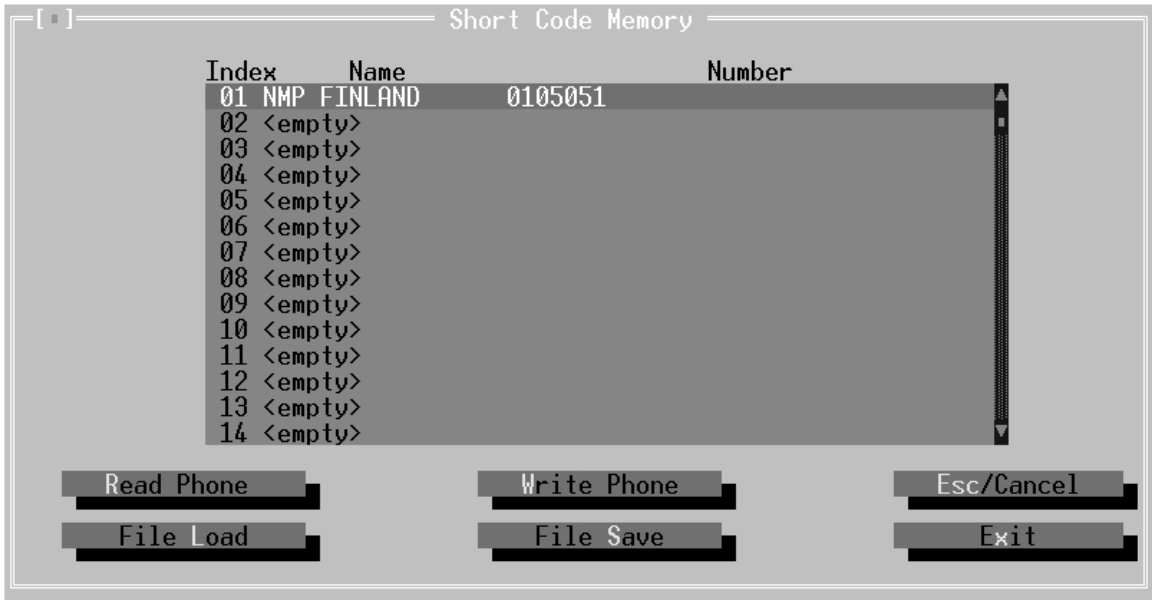
1. Select NAM 1 or 2
2. Select Default – scroll through the available defaults using the arrow keys until you find the desired default. All the default information will be displayed on the PC screen
3. Select Number and program the new subscriber number using the normal text editing keys
4. Select Wake up and program the new Wake up message using the normal text editing keys. To help with the message alignment, the phone's display will constantly be updated during this process
5. Select lock and program the new lock code using the normal text editing keys
6. Select *Enter* to save to EEPROM.

Alternatively, the user is able to program each individual parameter if they choose not to use the customisation feature.

## Short Code Memory

Selecting Dealer/Short Code Memory opens the short code memory dialog box. In this box you can view and edit all memory locations of the phone. You can also store the information to a file and read information from a file. It is also possible to read short code memory files generated by other product's PCLocals software. The following PCLocals supports this general file format.

The SCM editing dialog box is shown below:




In the editing dialog box, edit or type in a new name and number. You can change the field with the *Tab* key or clicking with a mouse. When this is complete you are able to accept the new values and return to the full SCM dialog box by pressing *Enter* or by clicking the corresponding button. *Esc* will cancel the operation.

In the SCM dialog box the following command buttons are available:

| | |
|---|---|
| File Load (*Alt+L*) | Reads SCM data from a file. You can select a file to be loaded from the File selection dialog box. |
| File Save (*Alt+S*) | Writes SCM data to a file. You can select the file to write to from the File selection dialog box. |
| Read Phone (*Alt+R*) | Reads SCM data from the phone and updates it to the display. |
| Write Phone (*Alt+W*) | Writes SCM data to the phone. Before writing the user is asked to confirm the writing. |
| Esc–Close | Closes the SCM programming dialog box. Click the button or press the *Esc* key. |

## User Menu Settings

By selecting Dealer/User Menu Settings you can view and change the following User Menu parameters:

- Lights
- Ring Volume
- Tone Volume
- Ring Type
- Emergency
- Phone Lock

You can move between these groups by using the *Tab* key and select a new setting using the arrow keys. Alternatively, you can click on the desired value with the mouse. Press *Enter* or click on the corresponding button with the mouse to save the new settings to the EEPROM or press *Esc* to exit the dialog box without altering the original values.

## User Data Transfer

Selecting Dealer/User Data Transfer allows all of the User data (excluding the ESN) to be transferred from one phone's EEPROM and programmed into another phone's EEPROM.

In the User Data Dialog dialog box the following buttons are available:

| | |
|---|---|
| Read Phone (*Alt+R*) | Reads user data items that are checked from telephone. |
| Write Phone (*Alt+W*) | Writes user data to the phone. Before writing the user is asked to confirm the writing. |
| Esc–Close | Closes the user transfer dialog box. Click the button or press the *Esc* key. |

## Phone Identification

By selecting this option you can see phone type and version.

## Warranty Information

*NOTE! Command Warranty Information contains also editing repair month though it is not transferred to other phone.*

If phone is not Warranty Defective Phone, command asks if repair month is edited or warranty information transferred.

If phone is warranty defective phone, command automatically activates repair month editing.

*1)* Warranty Information contains contents of NAM (except NAM password), Short Code Memory, User Menu Settings, manufacturing month, purchasing month and warranty serial number.

Warranty serial number of exchange phone is:

*a)* serial number of original phone if warranty serial number of original phone is empty.

*b)* warranty serial number of original phone if warranty serial number of original phone is NOT empty.

*2)* Original phone will be made warranty defective phone when warranty

*3)* Warranty information will not be transferred to other phone if

*a)* Original phone is warranty defective phone (command goes automatically to ’edit repair month’ mode)

*b)* NAM password of original phone differs from that of exchange phone.

*c)* Exchange phone is warranty defective phone.

*NOTE! In cases b) and c) you must immediately return the original phone to jig to avoid making it to warranty defective phone!*

# Help Menu

Choose Help/Using Help to obtain information on how to use the help facilities.

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